

**REMARKS**

Applicant submits this Amendment in response to the Office Action<sup>1</sup> mailed on June 6, 2007.

In the Office Action, claims 1-14 and 25-28 were rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter; claims 8-14 were rejected under 35 U.S.C. § 112 (second paragraph) as allegedly being indefinite; claims 1-14 and 25-28 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over “SolidWorks Tools - ACP4SWX Overview,” which may be found at [http://web.archive.org/web/\\*/http://swtools.cad.de/us\\_prog\\_acp.htm](http://web.archive.org/web/*/http://swtools.cad.de/us_prog_acp.htm) as originally posted by Stefan Berlitz regarding Software ver. 1.1.0 released 06/26/2001 (hereinafter “ACP4SWX”); and claims 15-24 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over ACP4SWX in view of Maeda et al. (U.S. Patent 5,966,310).

By this Amendment, Applicant amends claims 2, 8-14, 20, and 22-23 in order to correct minor informalities and place this application in condition for allowance or otherwise for appeal. After entry of this Amendment, claims 1-28 will remain pending. Of these, claims 1, 8, 15, and 22 are the only independent claims.

**§ 101 Rejection of Claims 1-14 and 25-28**

Applicant traverses the § 101 rejection of claims 1-14 and 25-28 because these claims are statutory. According to the Federal Circuit, the inquiry of whether a claim is statutory focuses on “the essential characteristics of the subject matter, in particular, its practical utility.” *State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d

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<sup>1</sup> The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether or not any such statement is identified herein, Applicant declines to automatically subscribe to any statement or characterization in the Office Action.

1368, 1375, 47 USPQ2d (BNA) 1596, 1602 (Fed. Cir. 1998). If a claim includes recitations that produce “a concrete, tangible and useful result,” the claim is not abstract and has practical utility. See *id.* at 1373, 1600-01; *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1358 (Fed. Cir. 1999), 50 USPQ2d 1447, 1451-52. If the claim is not abstract and has practical utility, it is statutory under 35 U.S.C. § 101.

The Examiner alleges that Applicant’s claims do not “result in a practical application producing a concrete, useful, and tangible result.” (Office Action, page 2). Applicant respectfully disputes this allegation.

First, the claimed invention is useful. The specification explains that the claimed invention is useful for colorizing schematic drawings to assist in finding high-level systems or circuits (page 1, paragraph 03). For example, the claimed systems and methods may separately colorize a braking circuit or a throttle control circuit and store the color associated with each system (page 6, paragraph 19). Such colorized schematics of a machine or vehicle may allow a technician to easily locate components and wiring associated with a particular system that the technician is trying to repair or maintain (page 2, paragraph 03). Thus, the claimed invention provides useful, non-abstract results.

Moreover, the subject matter defined by Applicant’s claims is tangible. The claims recite more than mere mathematical constructs. Applicant refers to the PTO’s “Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility,” which states:

The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or

apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement does require that the claim must recite more than a § 101 judicial exception, in that the process claim must set forth a practical application of that § 101 judicial exception to produce a real-world result.

Pages 21-22, internal citations omitted (emphasis added).

In this case, the claims set forth the practical application of automating the colorization of schematics in such a way that eliminates the need for time consuming and expensive processes of manually coloring and subsequently revising a hardcopy schematic (page 3, paragraphs 07 and 31-33). Traditionally, the step of colorizing printed schematics was done by hand by persons having detailed knowledge of the system design, whereas the step of creating publishable colorized schematics was performed by outside vendors with expertise in publishing (page 2, paragraphs 4-5). The claimed systems and methods are useful for eliminating these complex, time-consuming, and costly processes (page 3, paragraph 07; page 11, paragraphs 31-32). Moreover, the automated systems and methods improve colorization accuracy by eliminating the probability of human error (page 11, paragraph 33). For at least these reasons, the claimed systems and methods provide practical, real-world application and the Applicant's claimed invention is tangible.

Additionally, Applicant's claims define subject matter that is concrete. Independent claims 1 and 8 both recite, *inter alia*, "generat[ing] a colorized schematic." Thus, the claimed invention produces an identifiable output, which may be visualized, displayed or stored. This output facilitates the identification of high-level systems and components.

Applicant again refers to the PTO's "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility," which states:

While abstract ideas, natural phenomena, and laws of nature are not eligible for patenting, methods and products employing abstract ideas, natural phenomena, and laws of nature to perform a real-world function may well be. In evaluating whether a claim meets the requirements of section 101, the claim must be considered as a whole to determine whether it is for a particular application of an abstract idea, natural phenomenon, or law of nature, rather than for the abstract idea, natural phenomenon, or law of nature itself.

Pages 17-18, internal citations omitted (emphasis added).

Even assuming that the claimed invention could be said to include abstract elements, although Applicant disputes that notion, the Examiner has not established that each of the claims, as a whole, fails to provide a particular application of those elements. Indeed, as discussed above, Applicant's claims and specification provide particular, real-world applications of the claimed method and computer-readable medium. In addition, as discussed above, claims 1-14 and 25-28 include recitations that are tangible and non-abstract.

Independent claims 1 and 8 are drawn to subject matter that provides useful, concrete, and tangible results, and are therefore not abstract, but rather, statutory under 35 U.S.C. § 101. Likewise, dependent claims 2-7, 9-14, and 25-28 are implicitly drawn to subject matter that provides useful, concrete, and tangible results and are therefore statutory as well. Accordingly, Applicant requests withdrawal of the rejection of claims 1-14 and 25-28 under 35 U.S.C. § 101.

**§ 112 Rejection of Claims 8-14**

Claims 8-14 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, the Examiner states that the claims, “do not clearly display whether the claims are of computer-readable medium/instructions or method type...” and that “...it is not clear whether the Applicant means to claim the computer instructions for performing the steps or the method of performing the steps recited in the body of claim 8.” (Office Action, page 3). Although Applicant respectfully traverses this rejection, Applicant has amended claims 8-14 to more clearly indicate the single class of statutory subject matter to which the claims are directed.

According to the M.P.E.P., “[a] single claim which claims both an apparatus and the method steps of using the apparatus is indefinite under 35 U.S.C. 112, second paragraph. *M.P.E.P.* § 2173.05(p) II. *See also IPXL Holdings v. Amazon.com, Inc.*, 430 F.2d 1377, 1384 (Fed. Cir. 2005) (holding that a claim reciting both a system and the method for using that system does not apprise a person of ordinary skill in the art of its scope, and is invalid under section 112, paragraph 2) and *Ex parte Lyell*, 17 USPQ 2d 1548 (Bd. Pat. App. & Inter. 1990) (holding that a claim directed to “a workstand and method for using same” is invalid under section 112, paragraph 2).

Claims 8-14 are not indefinite because they particularly point out and distinctly claim the subject matter, including the single statutory class, to which they are directed. One of ordinary skill in the art would understand that claims reciting, “a computer-readable medium including instructions executable by a computer to colorize a schematic including at least one feature” are directed to the computer-readable medium

including instructions and not to a method. Therefore, the claims are directed only to a single class of statutory subject matter and Applicant respectfully requests that the rejection of claims 8-14 under § 112 be withdrawn.

**§ 103(a) Rejection of Claims 1-14 and 25-28**

Applicant respectfully traverses the § 103(a) rejection of claims 1-14 and 25-28. Independent claims 1 and 8 each recite a method or computer-readable medium including, *inter alia*, “obtaining a schematic generated from a feature-based parametric modeling tool.” The Office Action admits that “ACP4SWX does not explicitly disclose obtaining the schematic, diagram, blueprint or actual illustration of the element from SolidWorks.” (Office Action, page 5). To remedy this deficiency, the Examiner states that “[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the design element color obtaining and setting techniques of ACP4SWX including an actual visual reference to the element being colored in order to provide an easier-to-use more intuitive coloring system making the target color object and other surrounding objects easier to visualize while manipulating them.” (Office Action, page 5). Applicant respectfully submits that this allegedly obvious implementation does not render the claimed invention unpatentable under § 103(a).

Even if it would have been obvious to “implement the design element color obtaining and setting techniques of ACP4SWX including an actual visual reference to the element being colored,” as alleged by the Examiner, it would not have been obvious to perform the step of “obtaining a schematic generated from a feature-based parametric modeling tool,” as recited in independent claims 1 and 8 (emphasis added).

ACP4SWX merely describes “set[ting] color for faces, features or components of (all, selected or main part/assy)” in a 3-D modeling tool. (Page 4). The website also states that a user can “set color for component faces or features WITHOUT LEAVING THE ASSEMBLY!!” (Page 4). Thus, the Examiner has only pointed to the use of ACP4SWX in colorizing various three-dimensional elements within a modeling tool such as SolidWorks. (Office Action, page 5). In fact, this approach teaches away from the claimed invention and fails to recognize the substantial difference between having “an actual visual reference to the element being colored” (e.g., a 3-D object in a modeling tool), as suggested by the Examiner, and “obtaining a schematic generated from a feature-based parametric modeling tool.”

ACP4SWK does not even contemplate the colorizing of “a schematic” at all, as required by independent claims 1 and 8. As discussed during the interview of March 13, 2007 and described in Applicant’s specification at paragraph [02], “[t]hese schematic drawings may include, for example, electrical components as well as interconnected wiring.” In paragraph [04], a schematic is described as a drawing that can be printed and then manually colored. In paragraph [16], it is stated that schematics may include engineering schematics, blueprints, diagrams, or any other illustration where color may be associated with an aspect of the design. The above descriptions of the word “schematic” are consistent with the meaning that one of skill in the art would attribute to the word as claimed in independent claims 1 and 8.

Thus, even accepting the Examiner’s statement of obviousness as fact, ACP4SWX cannot be read to render obvious the step of “obtaining a schematic generated from a feature-based parametric modeling tool,” as defined and explained in

Applicant's specification and claimed in independent claims 1 and 8. Moreover, any allegation that it would have been obvious to obtain a schematic from a feature-based parametric modeling tool, could only result from impermissible use of hindsight, and not on any cited references or reasonable rationale currently of record.

Therefore, neither ACP4SWX nor the Examiner's statement of obviousness, either alone or in combination, discloses or suggests the invention as claimed. For at least this reason, ACP4SWX does not render claims 1 and 8 unpatentable under 35 U.S.C. § 103. Claims 2-7, 9-14, and 25-28 depend from claims 1 and 8 and are patentable over ACP4SWX for at least the same reasons as claims 1 and 8, discussed above. Reconsideration is requested.

With regard to claim 4 in particular, the Office Action "interprets ACP4SWX to inherently determine only those color-to-feature associations that differ from the previous schematic to the new/different or revised schematic and only change and associate those features." (Office Action, page 6). Applicant respectfully submits that this statement of inherency is unreasonable and unsupported by cited evidence or rationale. Specifically, nothing in ACP4SWX indicates a desire to automatically colorize unchanged portions of a revised schematic in the same manner as performed in a previously stored colorized schematic. Nor is there any reason to assume that such a method "necessarily flows" from the teachings of ACP4SWX because the software of ACP4SWX could just as easily re-colorize unchanged portions of a revised schematic. The Examiner's reconsideration in this regard is respectfully requested.



**§ 103(a) Rejection of Claims 15-24**

Independent claim 15 recites, *inter alia*, a system “configured to obtain a schematic generated from a feature-based parametric modeling module.” As discussed above with respect to claims 1 and 8, ACP4SWX fails to disclose or suggest obtaining a schematic generated from a feature-based parametric modeling tool. Maeda fails to rectify the deficiency of ACP4SWX. Therefore, neither ACP4SWX nor Maeda, either alone or in combination, disclose or suggest the invention as claimed. For at least this reason the rejection of claim 15 should be withdrawn. Claims 16-20 depend from claim 15 and are distinguishable over the prior art for at least this reason. Reconsideration is requested.

Independent claim 22 recites, *inter alia*, a “colorization module” configured to “obtain a schematic generated from a feature-based parametric modeling tool.” As discussed with respect to claims 1 and 8, ACP4SWX fails to teach or suggest the above-noted feature of claim 22. Maeda does not cure the deficiencies of ACP4SWX. Therefore, neither ACP4SWX nor Maeda, either alone or in combination, disclose or suggest the claimed invention. For at least this reason, the rejection of claim 22 should be withdrawn. Claims 23-24 depend from claim 22 and are distinguishable over the prior art for at least this reason. Reconsideration is requested.

**Conclusion**

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

If the Examiner believes a telephone conversation might advance prosecution, the Examiner is invited to call Applicant's undersigned representative at 202-408-4488.

If there is any fee due in connection with the filing of this Amendment, please charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted,

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